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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,236	10/09/2003	Wolfgang Meyer-Ingold	P24007	6515
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GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				STITZEL, DAVID PAUL
ART UNIT		PAPER NUMBER		
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DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/681,236	MEYER-INGOLD ET AL.
	Examiner	Art Unit
	David P. Stitzel, Esq.	1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-102 is/are pending in the application.
 - 4a) Of the above claim(s) 45,46,55 and 67-97 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-44,47-54,56-66 and 98-102 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/14/04; 10/05/05</u> . | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
6) <input type="checkbox"/> Other: _____. |
|---|---|

OFFICIAL ACTION

Restriction/Election

Restriction to one of the following inventions is required under 35 U.S.C. § 121:

- I. Claims 1-67 and 98-102 are drawn to an antimicrobial wound covering article, as classified in class 424, subclass 443.
- II. Claims 68-78 are drawn to a method of covering a wound, as classified in class 424, subclass 78.06.
- III. Claims 79-97 are drawn to a process for making an antimicrobial wound covering article, as classified in class 424, subclass 485.

1. Inventions I and II are related as a product and a method of using said product, respectively. The inventions can be shown to be distinct if either or both of the following can be shown that: (1) the method of using the product as claimed can be practiced with another materially different product; or (2) the product as claimed can be used by another method that is materially different from the instantly claimed method of using said product. See MPEP § 806.05(h). In the instant case, a product as claimed in Invention I can be used by another method that is materially different from the method claimed in Invention II. For example, as opposed to using said antimicrobial wound covering article for covering a wound as claimed in Invention II, the composition claimed in Invention I may alternatively be used for covering a toilet seat, so as to impart protection from pathogenic microorganisms.

Inventions I and III are related as a product and a method of making said product, respectively. The inventions can be shown to be distinct if either or both of the following can be shown that: (1) the method of making the product as claimed can be used to make another materially different product; or

(2) the product as claimed can be used by another method that is materially different from the instantly claimed method of making said product. See MPEP § 806.05(f). In the instant case, a product as claimed in Invention I can be produced by another method that is materially different from the method claimed in Invention III. For example, as opposed to merely combining (i.e., mixing or blending) a silver containing particulate glass with a polyurethane resin to produce said antimicrobial wound covering article as claimed in Invention III, the composition claimed in Invention I may alternatively be made by evenly distributing, via sprinkling, silver containing particulate glass into an injection mold and subsequently injecting a molten polyurethane resin into said injection mold containing said silver containing particulate glass evenly distributed therein to produce the antimicrobial wound covering article claimed in Invention I.

Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects. See MPEP §§ 806.04 and 808.01. In the instant case, the method as claimed in Invention II has a mode of operation of covering a wound, whereas the method claimed in Invention III has a mode of operation of producing an antimicrobial wound covering article. As a result, the method as claimed in Invention II has a materially different mode of operation from the method claimed in Invention III and are therefore unrelated.

Because these inventions are independent and distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, the prior art search required for each respective invention would be divergent, thereby causing an undue search burden. As a result, restriction for examination purposes as indicated is proper. Applicants are therefore required under 35 U.S.C. § 121 to elect a single invention for prosecution on the merits.

2. Claims 43-46, 55 and 67 are generic to a plurality of disclosed patentably distinct species of silver containing glass compositions comprising various metal oxides, which are present in various mole percent ranges, selected from the group consisting of: P_2O_5 ; CaO ; MgO ; ZnO ; CuO ; Na_2O ; K_2O ; Li_2O ; SiO_2 ; Al_2O_3 ; and B_2O_3 . Because each of the disclosed species of silver containing glass compositions are patentably distinct, each from the other, restriction for examination purposes as indicated is proper.

Even though this requirement is traversed, Applicants are required under 35 U.S.C. § 121 to elect a single disclosed patentably distinct species of a silver containing glass composition (i.e., a silver containing glass composition comprising: about 40-60 mole % P_2O_5 ; about 35-55 mole % MgO ; up to about 5 mole % Na_2O ; and about 5-20 mole % SiO_2), for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held allowable. Currently, claims 43-46, 55 and 67 are generic.

3. Claims 52 and 53 are generic to a plurality of disclosed patentably distinct species of metal or compound thereof, incorporated within said polyurethane resin, wherein said metal or compound thereof comprises: aluminum, zinc or magnesium. Because each of the disclosed species are patentably distinct, each from the other, restriction for examination purposes as indicated is proper.

Even though this requirement is traversed, Applicants are required under 35 U.S.C. § 121 to elect a single disclosed patentably distinct species of metal (i.e., Zn), or a compound thereof (i.e., ZnO), for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held allowable. Currently, claims 52 and 53 are generic.

Conclusion to Restriction Requirement

The Examiner has required restriction between products, methods of using, and methods of making claims. Where Applicants elect claims directed to a product, and the product claim is subsequently found allowable, withdrawn methods of using and methods of making claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. Methods of using and methods of making claims that depend from or otherwise include all the limitations of the patentable product claim will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined methods of using and methods of making claims will be withdrawn, and the rejoined methods of using and methods of making claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. §§ 101, 102, 103 and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and methods of using and methods of making claims may be maintained. Withdrawn methods of using and methods of making claims that are not commensurate in scope with an allowed product claim will not be rejoined. See “Guidance on Treatment of Product and Process Claims in light of *In re Ochiai*, *In re Brouwer* and 35 U.S.C. § 103(b),” 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicants are advised that the methods of using and methods of making claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. Failure to do so may result in a loss of the right to rejoinder. Further, note that the prohibition against double patenting

rejections of 35 U.S.C. § 121 does not apply where the restriction requirement is withdrawn by the Examiner before the patent issues. See MPEP § 804.01.

Applicants are advised that a fully responsive reply to this requirement must include an explicit identification of: 1. a silver containing glass composition (i.e., a silver containing glass composition comprising: about 40-60 mole % P₂O₅; about 35-55 mole % MgO; up to about 5 mole % Na₂O; and about 5-20 mole % SiO₂); and 2. a single disclosed patentably distinct species of metal (i.e., Zn), that is elected consonant with this requirement, and a listing of all claims, including any claims subsequently added thereto, which are readable upon the elected species and subspecies. An argument that a claim is allowable or that claims are not generic is considered nonresponsive unless accompanied by an explicit election of a specific species and subspecies. See 37 C.F.R. § 1.143.

Should Applicants traverse on the ground that the species are not patentably distinct, Applicants should submit evidence or identify such evidence now of record showing the species and subspecies to be obvious variants over one another or clearly admit on the record that this is the case. In either instance, if the Examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. § 103(a) of the other inventions.

If claims are added after the election, Applicants must explicitly indicate which claims are readable upon the elected species. See MPEP § 809.02(a). Amendments submitted after final rejection are governed by 37 CFR 1.116, whereas amendments submitted after allowance are governed by 37 CFR 1.312.

Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR § 1.48(b) if one or more of the currently named Inventors is no longer an actual Inventor of at least one claim remaining in the application.

Any amendment of inventorship must be accompanied by a request under 37 CFR § 1.48(b) and by the fee required under 37 CFR § 1.17(i).

Election & Telephone Interview Summary

Pursuant to a telephone interview held with the attorney of record, namely Mr. Heribert F. Muensterer, Esq., on July 17, 2006, at approximately 12:00 PM EST, an election was made *with traverse* to prosecute: the invention of Group I encompassing claims 1-67 and 98-102; a silver containing glass composition comprising: about 40-60 mole % P₂O₅; about 35-55 mole % MgO; up to about 5 mole % Na₂O; and about 5-20 mole % SiO₂, as the patentably distinct species of a silver containing glass composition; and zinc as the patentably distinct species of metal to be incorporated within said polyurethane resin. As a result and pursuant to 37 CFR § 1.142(b), claims 45, 46, 55, 67 and 68-97 are withdrawn from further consideration as being directed to a non-elected invention.

Status of Claims

Claims 45, 46, 55, 67 and 68-97 are withdrawn from further consideration as being directed to a non-elected invention. As a result, claims 1-44, 47-54, 56-66 and 98-102 are therefore examined herein on the merits for patentability.

Nonstatutory Double Patenting

A nonstatutory double patenting rejection of the “obviousness-type” is based on a judicially created doctrine grounded in public policy so as to prevent not only the unjustified or improper timewise extension of the “right to exclude” granted by a patent, but also possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re White*, 405 F.2d 904, 160 USPQ 417 (CCPA 1969); *In re*

Schneller, 397 F.2d 350, 158 USPQ 210 (CCPA 1968); and *In re Sarett*, 327 F.2d 1005, 140 USPQ 474 (CCPA 1964).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned or assigned with this application. See 37 CFR 1.130(b). Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

When considering whether the invention defined in a claim of an application is an obvious variation of the invention defined in the claim of a patent, the disclosure of the patent may not be used as prior art. See MPEP § 804. However, this does not mean that one is absolutely precluded from all use of the patent disclosure. See MPEP § 804. For example, the specification can always be used as a dictionary to learn the meaning of a term in the patent claim. *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Furthermore, ***those portions of the specification which provide support for the patent claims may also be examined and considered*** when addressing the issue of whether a claim in the application defines an obvious variation of an invention claimed in the patent. *In re Vogel*, 422 F.2d 438, 441-442, 164 USPQ 619, 622 (CCPA 1970). The court in *Vogel* stated that one must first “determine how much of the patent disclosure pertains to the invention claimed in the patent” because only “[t]his portion of the specification supports the patent claims and may be considered.” The court in *Vogel* also pointed out that “this use of the disclosure is not in contravention of the cases forbidding its use as prior art, nor is it applying the patent as a reference under 35 U.S.C. § 103, since only the disclosure of the invention claimed in the patent may be examined.”

1. Claims 1-25, 40, 43, 44, 47-54, 58, 60-62, 66 and 98-102 of the instant application are provisionally rejected under the judicially created doctrine of non-statutory obviousness-type double patenting as being unpatentable over conflicting claims 1, 3, 4, 8-13, 16, 17, 20, 21, 23-39, 45, 55, 56, 60-63, 65, 67-71, 73-86 and 99-103 of copending U.S. Patent Application Serial Number 10/681,204 (hereinafter the conflicting Meyer-Ingold '204 application).

More specifically, claims 1-25, 40, 43, 44, 47-54, 58, 60-62, 66 and 98-102 of the instant application are directed to an antimicrobial wound covering article, wherein said antimicrobial wound covering article comprises: a polyurethane resin; and a silver containing glass composition.

Claims 1, 3, 4, 8-13, 16, 17, 20, 21, 23-39, 45, 55, 56, 60-63, 65, 67-71, 73-86 and 99-103 of the conflicting Meyer-Ingold '204 application are directed to an antimicrobial polymeric composite for use in a wound management product, wherein said antimicrobial polymeric composite comprises: a polyurethane; and a silver containing glass composition.

As a result, although claims 1-25, 40, 43, 44, 47-54, 58, 60-62, 66 and 98-102 of the instant application are not identical to claims 1, 3, 4, 8-13, 16, 17, 20, 21, 23-39, 45, 55, 56, 60-63, 65, 67-71, 73-86 and 99-103 of the conflicting Meyer-Ingold '204 application, the aforementioned claims are not patentably distinct each from the other because said claims are substantially overlapping in scope as discussed hereinabove. This is a provisional non-statutory double patenting rejection since the conflicting claims have not yet been patented.

Claim Rejections - 35 U.S.C. § 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. § 112, which forms the basis of the claim rejections as set forth under this particular section of the Official Action:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 26, 27 and 36 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. With respect to claims 26, 27 and 36, confusion exists with respect to how a polyether polyol comprising from about 2 to about 6 hydroxy groups can have a hydroxy number of from about 20 to about 120. Appropriate clarification/correction is requested/required.
2. Claim 39 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. With respect to claim 39, confusion exists with respect to what is meant by the claimed recitation of a functionality value being at least about 5.2. Appropriate clarification/correction is requested/required.
3. Claims 101 and 102 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. With respect to claims 101 and 102, confusion exists with respect to what is meant by the claimed recitation of an antimicrobial activity value being at least about 3.6 and 3.3, respectively, against a particular microorganism “when tested according to JIS 2801:2000.” Appropriate clarification/correction is requested/required.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of the appropriate paragraph of 35 U.S.C. § 103, which forms the basis of the obviousness rejections as set forth under this particular section of the Official Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. § 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-8, 10, 19, 25-39, 41, 48, 49, 50, 54, 56-62, 64-66, 101 and 102 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,191,216 (hereinafter the Ganster '216 patent) in view of U.S. Patent 5,470,585 (hereinafter the Gilchrist '585 patent).

With respect to claims 1, 25-39, 49, 59-62, 65 and 66 of the instant application, the Ganster '216 patent teaches a wound covering article in the form of a gauze bandage or wound dressing, as claimed in claims 60-62, wherein said wound covering article comprises: a polyurethane resin, as claimed in claim 1; an inorganic glass filler dispersed within said polyurethane resin; and a bismuth catalyst residue, as claimed in claim 65; wherein said inorganic glass filler is present within said polyurethane resin in an amount of up to about 100 wt. %, as claimed in claim 49; wherein said polyurethane resin comprises: hexamethylene diisocyanate; and a polyether polyol derived from ethylene glycol, diethylene glycol, polyethylene oxide, propylene glycol, dipropylene glycol, polypropylene oxide, pentaerythritol, and combinations thereof, as claimed in claims 25, 29, 30, 32-35, 37, 59 and 66; wherein said polyether polyol comprises: an ethylene oxide content of greater than or equal to 10 wt. %, as claimed in claims 28 and 36; an average molecular weight of about 6,400, as claimed in claim 31; from about 2 to about 6 hydroxyl groups, as claimed in claims 26 and 36; hydroxy values of from about 20 to about 112, as claimed in claims 27 and 36; wherein a ratio of free

isocyanate functional groups to free hydroxy functional groups ranges from about 0.30 to about 0.70, as claimed in claim 38; wherein a functionality of hexamethylene diisocyanate and polyether polyol is at least about 5.2, as claimed in claim 39 (abstract; column 2, lines 1-67; column 3, lines 1-7, 31-37 and 44-67; column 4, lines 1-3 and 20-67; column 5, lines 1-39 and 58-67).

With respect to claims 1-8, 10, 19, 41, 48, 50, 54, 56-58, 64, 101 and 102 of the instant application, the Ganster '216 patent does not explicitly teach that said wound covering article is an antimicrobial wound covering article comprising a silver containing water soluble glass filler, as said inorganic glass filler, which is dispersed within said polyurethane resin in an amount from about 0.05 wt. % to about 10 wt. %, as claimed in claims 1-3, 8 and 48; wherein said inorganic glass filler is a silver containing water soluble glass filler comprising: phosphorus pentoxide (P_2O_5) present in an amount from about 38 mole % to about 50 mole %; magnesium oxide (MgO) and/or sodium oxide (Na_2O) present in an amount from about 10 mole % to about 40 mole %; silicon dioxide (SiO_2) present in an amount of less than about 5 mole %; and silver oxide (Ag_2O) present in an amount from about 0.5 mole % to about 2.5 mole %, as claimed in claim 54; wherein said antimicrobial wound covering article may be in the form of a foam, gel, hydrogel, adhesive and/or sheet having a thickness of from about 0.1 mm to about 2 mm, as claimed in claims 4-7, 10, 19 and 56-58; wherein said silver containing water soluble glass filler, as said inorganic glass filler, may be in the form of a fiber or a sintered glass powder of a particular particle size, as claimed in claim 41; wherein said antimicrobial wound covering article is capable of releasing silver ions, which inhibits the growth of various microorganisms including *Escherichia coli* and *Staphylococcus aureus*, at a rate from about $10\text{ mg}/(\text{m}^2 \cdot 24\text{ hr})$ to about $40\text{ mg}/(\text{m}^2 \cdot 24\text{ hr})$ for a period of at least about 10 hours, as claimed in claims 50, 64, 101 and 102.

However, the Gilchrist '585 patent teaches an antimicrobial wound covering article in the form of a gauze bandage or wound dressing, as claimed in claims 60-62, wherein said antimicrobial wound covering article comprises: synthetic polymers; and a silver containing water soluble glass filler dispersed within said synthetic polymers in an amount of about 10 wt. %, as claimed in claims 1-3, 8 and 48; wherein said silver containing water soluble glass filler comprises: phosphorus pentoxide (P_2O_5) present in an amount from about 38 mole % to about 50 mole %; magnesium oxide (MgO) and/or sodium oxide (Na_2O) present in an amount from about 10 mole % to about 40 mole %; silicon dioxide (SiO_2) present in an amount of less than about 5 mole %; and silver oxide (Ag_2O) present in an amount from about 0.05 mole % to about 5.0 mole %, as claimed in claim 54; wherein said antimicrobial wound covering article may be in the form of a foam, gel, hydrogel, adhesive and/or sheet having a thickness of about 2 mm, as claimed in claims 4-7, 10, 19 and 56-58; wherein said silver containing water soluble glass filler may be in the form of a fiber or a sintered powder of a particular particle size, as claimed in claim 41; wherein said antimicrobial wound covering article is capable of releasing silver ions, which inhibit the growth of various microorganisms including *Escherichia coli* and *Staphylococcus aureus*, at a rate from about $4.2 \text{ mg}/(\text{m}^2 \cdot 24 \text{ hr})$ to about $830 \text{ mg}/(\text{m}^2 \cdot 24 \text{ hr})$ for a period of hours, days, weeks, months and even years, as claimed in claims 50, 64, 101 and 102 (abstract; column 1, lines 8-20, 31-35 and 41-60; column 2, lines 29-33; column 3, lines 28-67; column 4, lines 1-15, 21-33 and 42-59; column 5, lines 28-30; column 6, Table 3; column 7, lines 6-8, 18-23, 58-63, 66 and 67; column 8, lines 4-15; column 11, lines 3 and 7).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the instant application was filed to modify the wound covering article comprising a polyurethane resin and an inorganic glass filler dispersed within said polyurethane resin of the Ganster '216 patent, by incorporating therein the silver containing water soluble glass filler of the Gilchrist '585 patent as said

inorganic glass filler dispersed within said polyurethane resin, so as to impart antimicrobial properties to the wound covering article of the Ganster '216 patent. One of ordinary skill in the art at the time the instant application was filed would have been motivated to incorporate the silver containing water soluble glass filler of the Gilchrist '585 patent as said inorganic glass filler dispersed within said polyurethane resin of the Ganster '216 patent, so as to protect said wound from bacterial and fungal infection, thereby promoting the healing of said wound, as reasonably suggested by the Gilchrist '585 patent.

2. Claims 9, 11, 12, 23, 24 and 47 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent, in view of U.S. Pre-Grant Patent Application Publication 2004/0018227 (hereinafter the Park '227 publication).

The teachings of the Ganster '216 patent and the Gilchrist '585 patent are incorporated herein by reference and are therefore applied in the instant rejection as discussed hereinabove.

In regard to claim 47 of the instant application, as previously discussed the Ganster '216 patent teaches a wound covering article comprising a polyurethane resin and an inorganic glass filler dispersed within said polyurethane resin, and the Gilchrist '585 patent teaches an antimicrobial wound covering article comprising synthetic polymers and a silver containing water soluble glass filler dispersed within said synthetic polymers in an amount of about 10 wt. %. However, claim 47 is dependent upon claim 9, which is discussed hereinbelow in greater detail.

With respect to claims 9, 11 and 12 of the instant application, neither the Ganster '216 patent, nor the Gilchrist '585 patent explicitly teach that said antimicrobial wound covering article forms a layer of from about 400 g/m² to about 1200 g/m², as claimed in claim 9, at a thickness of from about

0.4 mm to about 1.5 mm, as claimed in claim 11, and from about 0.6 mm to about 1.2 mm, as claimed in claim 12.

However, the Park ‘227 publication teaches that in order to assist in and promote the healing of said wound, a biostatic environment, as well as an appropriate moisture level and oxygen concentration should be maintained, all of which are regulated by covering said wound with an appropriate amount of said antimicrobial wound covering article at a thickness of from about 1 mm to about 7 mm, as claimed in claims 11 and 12 (abstract, [0007]-[0010], [0013], [0020], [0021], [0025], [0030], [0031], [0033], [0035], [0037], [0040], [0082], [0083]). Thus, while the Park ‘227 publication does not explicitly teach that said antimicrobial wound covering article covers said wound by forming a layer of from about 400 g/m² to about 1200 g/m², as claimed in claim 9, it is well within the purview of the skilled artesian to determine the optimal amount of antimicrobial wound covering article for covering said wound by systematically adjusting the amounts thereof during the course of routine experimentation. One of ordinary skill in the art at the time the instant application was filed would have been motivated to systematically adjust the amount of antimicrobial wound covering article for covering said wound, during the course of routine experimentation, so as to not only obtain a biostatic environment while maintaining appropriate moisture and oxygenation levels, but also promote the ultimate healing of said wound. “Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” See *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). “The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages.” See *Peterson*, 65 USPQ2d 1379, 1382 (Fed. Cir. 2003).

With respect to claims 23 and 24 of the instant application, neither the Ganster '216 patent, nor the Gilchrist '585 patent explicitly teach that said antimicrobial wound covering article further comprises a polymeric superabsorber in an amount from about 0.5 wt. % to about 30 wt. %, as claimed in claims 23 and 24.

However, the Park '227 publication teaches an antimicrobial wound covering article comprising: a synthetic polymer, such as a polyurethane polyethylene copolymer; and an additive present in an amount from about 0.5 wt. % to about 15 wt. %, wherein said additive includes humectants (i.e., superabsorbers) selected from karaya gum, sodium carboxymethylcellulose (NaCMC), and mixtures thereof (abstract, [0007]-[0010], [0013], [0020], [0021], [005], [0030], [0031], [0033], [0035], [0037], [0040], [0082], [0083]).

It would have been prima facie obvious to one of ordinary skill in the art at the time the instant application was filed to modify the antimicrobial wound covering article resulting from the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent to include a humectant (i.e., superabsorber) therein, so as to provide said antimicrobial wound covering article with the ability to rapidly absorb wound exudates, as reasonably taught by the Park '227 publication. One of ordinary skill in the art at the time the instant application was filed would have been motivated to incorporate humectants (i.e., superabsorbers), such as karaya gum, sodium carboxymethylcellulose (NaCMC), and mixtures thereof, into said antimicrobial wound covering article of the Ganster '216 patent and the Gilchrist '585 patent, so as to assist in and promote the healing of said wound, as reasonably suggested by the Park '227 publication.

3. Claim 17 is rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent, in view of U.S. Patent 4,920,172 (hereinafter the Daoud '172 patent).

The teachings of the Ganster '216 patent and the Gilchrist '585 patent are incorporated herein by reference and are therefore applied in the instant rejection as discussed hereinabove.

With respect to claim 17 of the instant application, neither the Ganster '216 patent, nor the Gilchrist '585 patent explicitly teach that said antimicrobial wound covering article possesses a water vapor permeability of from about 250 g/(m² · 24 hr) to about 2,500 g/(m² · 24 hr), as claimed in claim 17.

However, the Daoud '172 patent teaches an antimicrobial wound covering article comprising a synthetic polyurethane polymer and an antimicrobial agent dispersed within said synthetic polyurethane polymer; wherein said synthetic polyurethane polymer comprises: a diisocyanate; and a polyether polyol derived from ethylene glycol, ethylene oxide, propylene glycol, propylene oxide, pentaerythritol, and mixtures thereof; wherein said antimicrobial wound covering article possesses a water vapor permeability from about 640 g/(m² · 24 hr) to about 3,000 g/(m² · 24 hr), as claimed in claim 17 (column 1, lines 7-34 and 49-53; column 2, lines 34-42, 50 and 51; column 3, lines 49 and 50; column 4, lines 20-31, 37-49 and 54-65; column 5, lines 1-20; column 6, lines 21-28; column 7, lines 44-49; column 8, lines 45-53 and 64-67; column 9, lines 42-48).

It would have been prima facie obvious to one of ordinary skill in the art at the time the instant application was filed that the antimicrobial wound covering article resulting from the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent would in fact possess a water vapor permeability of from about 640 g/(m² · 24 hr) to about 3,000 g/(m² · 24 hr), because the antimicrobial wound covering article resulting from the combined teachings of the Ganster '216 patent and the

Gilchrist '585 patent comprises a polyurethane resin comprising: hexamethylene diisocyanate; and a polyether polyol derived from ethylene glycol, diethylene glycol, polyethylene oxide, propylene glycol, dipropylene glycol, polypropylene oxide, pentaerythritol, and combinations thereof, which is identical to, or an obvious variation of, the antimicrobial wound covering article of the Daoud '172 patent, which likewise comprises a synthetic polyurethane polymer comprising: a diisocyanate; and a polyether polyol derived from ethylene glycol, ethylene oxide, propylene glycol, propylene oxide, pentaerythritol, and mixtures thereof. One of ordinary skill in the art at the time the instant application was filed would have been motivated to combine the teachings of Daoud '172 patent with the teachings of the Ganster '216 patent and the Gilchrist '585 patent, since all of the aforementioned references are directed to covering a wound with a wound covering article.

4. Claims 16 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent, in view of the Park '227 publication and the Daoud '172 patent.

The teachings of the Ganster '216 patent, the Gilchrist '585 patent, the Park '227 publication, and the Daoud '172 patent are incorporated herein by reference and are therefore applied in the instant rejection as discussed hereinabove.

In regard to claims 16 and 18 of the instant application, as previously discussed the Daoud '172 patent teaches an antimicrobial wound covering article comprising a synthetic polyurethane polymer and an antimicrobial agent dispersed within said synthetic polyurethane polymer; wherein said synthetic polyurethane polymer comprises: a diisocyanate; and a polyether polyol derived from ethylene glycol, ethylene oxide, propylene glycol, propylene oxide, pentaerythritol, and mixtures thereof; wherein said antimicrobial wound covering article possesses a water vapor permeability from

about 640 g/(m² · 24 hr) to about 3,000 g/(m² · 24 hr), as claimed in claims 16 and 18. However, claims 16 and 18 are dependent upon claims 9 and 11, respectively, which were already rendered obvious in view of the teachings of the Park '227 publication, as previously discussed hereinabove.

It would have been prima facie obvious to one of ordinary skill in the art at the time the instant application was filed that the antimicrobial wound covering article resulting from the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent would in fact possess a water vapor permeability of from about 640 g/(m² · 24 hr) to about 3,000 g/(m² · 24 hr), since the antimicrobial wound covering article resulting from the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent comprises a polyurethane resin comprising: hexamethylene diisocyanate; and a polyether polyol derived from ethylene glycol, diethylene glycol, polyethylene oxide, propylene glycol, dipropylene glycol, polypropylene oxide, pentaerythritol, and combinations thereof, which is identical to, or an obvious variation of, the antimicrobial wound covering article of the Daoud '172 patent, which likewise comprises a synthetic polyurethane polymer comprising: a diisocyanate; and a polyether polyol derived from ethylene glycol, ethylene oxide, propylene glycol, propylene oxide, pentaerythritol, and mixtures thereof. One of ordinary skill in the art at the time the instant application was filed would have been motivated to combine the teachings of the Park '227 publication and the Daoud '172 patent with the teachings of the Ganster '216 patent and the Gilchrist '585 patent, since all of the aforementioned references are directed to covering a wound with a wound covering article.

5. Claims 14 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent, in view of U.S. Patent 5,591,820 (hereinafter the Kydonieus '820 patent).

The teachings of the Ganster '216 patent and the Gilchrist '585 patent are incorporated herein by reference and are therefore applied in the instant rejection as discussed hereinabove.

With respect to claims 14 and 17 of the instant application, neither the Ganster '216 patent, nor the Gilchrist '585 patent explicitly teach that said antimicrobial wound covering article possesses a liquid absorption capacity of from about 1 g/g to about 6 g/g, as claimed in claim 14, and a water vapor permeability of from about 250 g/(m² · 24 hr) to about 2,500 g/(m² · 24 hr), as claimed in claim 17.

However, the Kydonieus '820 patent teaches a wound covering article comprising a synthetic polyurethane polymer, wherein said synthetic polyurethane polymer comprises: a diisocyanate; and a polyol derived from ethylene oxide, polyethylene oxide, propylene oxide, polypropylene oxide, and copolymers thereof; wherein said wound covering article possesses a liquid absorption capacity of from about 20 wt. % to about 1000 wt. %, as claimed in claim 14; wherein said antimicrobial composition possesses a moisture vapor permeability of about 300 g/(m² · 24 hr), as claimed in claim 17 (abstract; column 1, lines 1-67; column 2, lines 1-67; column 3, lines 1-14 and 34-67; column 4, lines 1-10, 24-45, 66 and 67; column 5, lines 1-67; column 6, lines 65-67; column 7, lines 50-55).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the instant application was filed that the antimicrobial wound covering article resulting from the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent would in fact possess not only a liquid absorption capacity of from about 20 wt. % to about 1000 wt. %, but also a moisture vapor permeability of about 300 g/(m² · 24 hr) since the antimicrobial wound covering article resulting from the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent comprises a polyurethane resin comprising: hexamethylene diisocyanate; and a polyether polyol derived from ethylene glycol, diethylene glycol, polyethylene oxide, propylene glycol, dipropylene glycol, polypropylene oxide, pentaerythritol, and combinations thereof, which is identical to, or an obvious

variation of, the wound covering article of the Kydonieus '820 patent, which likewise comprises a synthetic polyurethane polymer comprising: a diisocyanate; and a polyol derived from ethylene oxide, polyethylene oxide, propylene oxide, polypropylene oxide, and copolymers thereof. One of ordinary skill in the art at the time the instant application was filed would have been motivated to combine the teachings of Kydonieus '820 patent with the teachings of the Ganster '216 patent and the Gilchrist '585 patent, since all of the aforementioned references are directed to covering a wound with a wound covering article.

6. Claims 13, 15, 16 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent, in view of the Park '227 publication and the Kydonieus '820 patent.

The teachings of the Ganster '216 patent, the Gilchrist '585 patent, the Park '227 publication, and the Kydonieus '820 patent are incorporated herein by reference and are therefore applied in the instant rejection as discussed hereinabove.

In regard to claims 13, 15, 16 and 18 of the instant application, as previously discussed the Kydonieus '820 patent teaches a wound covering article comprising a synthetic polyurethane polymer, wherein said synthetic polyurethane polymer comprises: a diisocyanate; and a polyol derived from ethylene oxide, polyethylene oxide, propylene oxide, polypropylene oxide, and copolymers thereof; wherein said wound covering article possesses a liquid absorption capacity of from about 20 wt. % to about 1000 wt. %, as claimed in claims 13 and 15; wherein said antimicrobial composition possesses a moisture vapor permeability of about $300 \text{ g}/(\text{m}^2 \cdot 24 \text{ hr})$, as claimed in claims 16 and 18. However, claims 13 and 16 are dependent upon claim 9, and claims 15 and 18 are dependent upon claim 11,

respectively, which were already rendered obvious in view of the teachings of the Park '227 publication, as previously discussed hereinabove.

It would have been prima facie obvious to one of ordinary skill in the art at the time the instant application was filed that the antimicrobial wound covering article resulting from the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent would in fact possess not only a liquid absorption capacity of from about 20 wt. % to about 1000 wt. %, but also a moisture vapor permeability of about $300 \text{ g}/(\text{m}^2 \cdot 24 \text{ hr})$, because the antimicrobial wound covering article resulting from the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent comprises a polyurethane resin comprising: hexamethylene diisocyanate; and a polyether polyol derived from ethylene glycol, diethylene glycol, polyethylene oxide, propylene glycol, dipropylene glycol, polypropylene oxide, pentaerythritol, and combinations thereof, which is identical to, or an obvious variation of, the wound covering article of the Kydonieus '820 patent, which likewise comprises a synthetic polyurethane polymer comprising: a diisocyanate; and a polyol derived from ethylene oxide, polyethylene oxide, propylene oxide, polypropylene oxide, and copolymers thereof. One of ordinary skill in the art at the time the instant application was filed would have been motivated to combine the teachings of the Park '227 publication and the Kydonieus '820 patent with the teachings of the Ganster '216 patent and the Gilchrist '585 patent, since all of the aforementioned references are directed to covering a wound with a wound covering article.

7. Claims 40, 42-44, 51-53 and 63 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent, in view of U.S. Pre-Grant Patent Application Publication 2004/0137075 (hereinafter the Fechner '075 publication).

The teachings of the Ganster '216 patent and the Gilchrist '585 patent are incorporated herein by reference and are therefore applied in the instant rejection as discussed hereinabove.

In regard to claims 42-44, 51 and 63 of the instant application, as previously discussed the Gilchrist '585 patent teaches an antimicrobial wound covering article comprising synthetic polymers and a silver containing water soluble glass filler dispersed within said synthetic polymers; wherein said silver containing water soluble glass filler comprises: phosphorus pentoxide (P_2O_5) present in an amount from about 38 mole % to about 50 mole %; magnesium oxide (MgO) and/or sodium oxide (Na_2O) present in an amount from about 10 mole % to about 40 mole %; silicon dioxide (SiO_2) present in an amount of less than about 5 mole %; and silver oxide (Ag_2O) present in an amount from about 0.05 mole % to about 5.0 mole %, as claimed in claims 43, 44; wherein said silver containing water soluble glass filler may be in the form of a sintered powder of a particular particle size, as claimed in claims 42; wherein said antimicrobial wound covering article is capable of releasing silver ions at a rate from about $4.2 \text{ mg}/(\text{m}^2 \cdot 24 \text{ hr})$ to about $830 \text{ mg}/(\text{m}^2 \cdot 24 \text{ hr})$ for a period of hours, days, weeks, months and even years, as claimed in claims 51 and 63 (abstract; column 1, lines 8-20, 31-35 and 41-60; column 2, lines 29-33; column 3, lines 28-67; column 4, lines 1-15, 21-33 and 42-59; column 5, lines 28-30; column 6, Table 3; column 7, lines 6-8, 18-23, 58-63, 66 and 67; column 8, lines 4-15; column 11, lines 3 and 7). However, claims 42-44, 51 and 63 are dependent upon claim 40, which is discussed hereinbelow in greater detail.

With respect to claims 40, 52 and 53 of the instant application, neither the Ganster '216 patent, nor the Gilchrist '585 patent explicitly teach that said sintered glass powder filler is in the form of particles having specific particle diameters of from about $0.1 \mu\text{m}$ to about $10 \mu\text{m}$, as claimed in claim 40, or that said synthetic polyurethane resin comprises zinc in an amount from about 0.01 wt. % to about 5 wt. %, as claimed in claims 52 and 53.

However, the Fechner '075 publication teaches an antimicrobial wound covering article comprising synthetic polymers and a silver and/or zinc containing water soluble glass filler dispersed within said synthetic polymers, wherein said antibacterial bioactive glass additive composition is in the form of particles having particle diameters of less than 5 μm , 2 μm and 1.5 μm , as claimed in claims 40, 52 and 53 (abstract, [0001], [0002], [0005]-[0038], [0040]-0051]).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the instant application was filed to modify the antimicrobial wound covering article resulting from the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent to include a silver and/or zinc containing water soluble glass filler dispersed within said synthetic polymers, wherein said antibacterial bioactive glass additive composition is in the form of particles having particle diameters of less than 5 μm , 2 μm and 1.5 μm , so as to enhance the biocidal efficacy of said antimicrobial composition by greatly increasing the reactivity of said silver and/or zinc containing water soluble glass filler, as reasonably taught by the Fechner '075 publication. One of ordinary skill in the art at the time the instant application was filed would have been motivated to incorporate a silver and/or zinc containing water soluble glass filler having particle diameters of less than 5 μm , 2 μm and 1.5 μm , as a filler additive for said synthetic polyurethane resin of the antimicrobial wound covering article resulting from the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent, so as to synergistically enhance the biocidal efficacy of said antimicrobial wound covering article, as reasonably suggested by the Fechner '075 publication.

8. Claims 98-100 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent, in view of U.S. Pre-Grant Patent Application Publication 2001/0023156 (hereinafter the Nomura '156 publication).

The teachings of the Ganster '216 patent and the Gilchrist '585 patent are incorporated herein by reference and are therefore applied in the instant rejection as discussed hereinabove.

With respect to claims 98-100 of the instant application, while the Gilchrist '585 patent teaches a silver containing water soluble glass filler dispersed within said synthetic polymers, wherein said silver containing water soluble glass filler comprises silver oxide (Ag_2O) present in an amount from about 0.05 mole % to about 5.0 mole %, neither the Ganster '216 patent, nor the Gilchrist '585 patent explicitly teach that said antimicrobial wound covering article, resulting from the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent, possesses discoloration resistance, as claimed in claims 98-100.

However, the Nomura '156 publication teaches an antimicrobial article composition comprising synthetic polymers and a silver containing water soluble glass filler dispersed within said synthetic polymers, wherein if said silver containing water soluble glass filler comprises silver oxide (Ag_2O) in an amount of less than or equal to about 5.0 mole %, discoloration of said synthetic polymers having said silver containing water soluble glass filler dispersed therein is avoided, as claimed in claims 98-100 (abstract, [0001], [0002], [0005]-[0038], [0040]-[0051]).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the instant application was filed that the antimicrobial wound covering article resulting from the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent would in fact possess discoloration resistance, because the antimicrobial wound covering article resulting from the combined teachings of the Ganster '216 patent and the Gilchrist '585 patent comprises a silver containing water soluble glass filler dispersed within said synthetic polymers, wherein said silver containing water soluble glass filler comprises silver oxide (Ag_2O) present in an amount from about 0.05 mole % to about 5.0 mole %. One of ordinary skill in the art at the time the instant application was filed would have been motivated

to combine the teachings of Nomura ‘156 publication with the teachings of the Ganster ‘216 patent and the Gilchrist ‘585 patent, since all of the aforementioned references are directed to dispersing glass filler within synthetic polymers.

9. Claims 20-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of the Ganster ‘216 patent and the Gilchrist ‘585 patent, in view of the Nomura ‘156 publication and U.S. Pre-Grant Patent Application Publication 2002/0086039 (hereinafter the Lee ‘039 publication).

The teachings of the Ganster ‘216 patent, the Gilchrist ‘585 patent, and the Nomura ‘156 publication are incorporated herein by reference and are therefore applied in the instant rejection as discussed hereinabove.

With respect to claims 20-22 of the instant application, neither the Ganster ‘216 patent, the Gilchrist ‘585 patent, nor the Nomura ‘156 publication explicitly teach incorporating within said antimicrobial wound covering article a white pigment, namely titanium dioxide (TiO_2), in an amount from about 0.01 wt. % to about 2 wt. %, as claimed in claims 20-21.

However, the Lee ‘039 publication teaches an antimicrobial skin covering article comprising a bioactive glass and a white pigment, namely titanium dioxide ([0091], [0132], [0136], [0140], [0144], [0146], [0148], [0152], [0155], [0170], [0174], [0197], [0204], [0212], [0230], [0329]).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the instant application was filed to modify the antimicrobial wound covering article, resulting from the combined teachings of the Ganster ‘216 patent and the Gilchrist ‘585 patent, to include a titanium dioxide pigment therein, so as to provide said antimicrobial wound covering article with a desired white colorant, as reasonably taught by the Lee ‘039 publication. One of ordinary skill in the art at the time

the instant application was filed would have been motivated to incorporate a titanium dioxide pigment into said antimicrobial wound covering article of the Gilchrist '585 patent, so as to impart an aesthetically pleasing white color to said antimicrobial wound covering article having a silver containing water soluble glass filler dispersed therein, as reasonably suggested by the Lee '039 publication, while masking any potential discoloration that may result from the presence of said silver oxide (Ag_2O) contained therein, as reasonably taught by the Nomura '156 publication.

Conclusion

Claims 1-44, 47-54, 56-66 and 98-102 are rejected because the claimed invention would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made since each and every element of the claimed invention, as a whole, would have been reasonably suggested by the teachings of the cited prior art references.

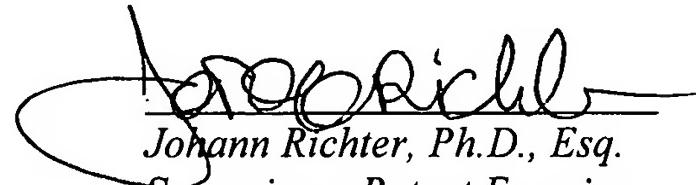
Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to David P. Stitzel, M.S., Esq., whose telephone number is 571-272-8508. The Examiner can normally be reached on Monday-Friday, from 7:30AM-6:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Johann Richter, Ph.D., Esq., can be reached at 571-272-0646. The central fax number for the USPTO is 571-273-8300.

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